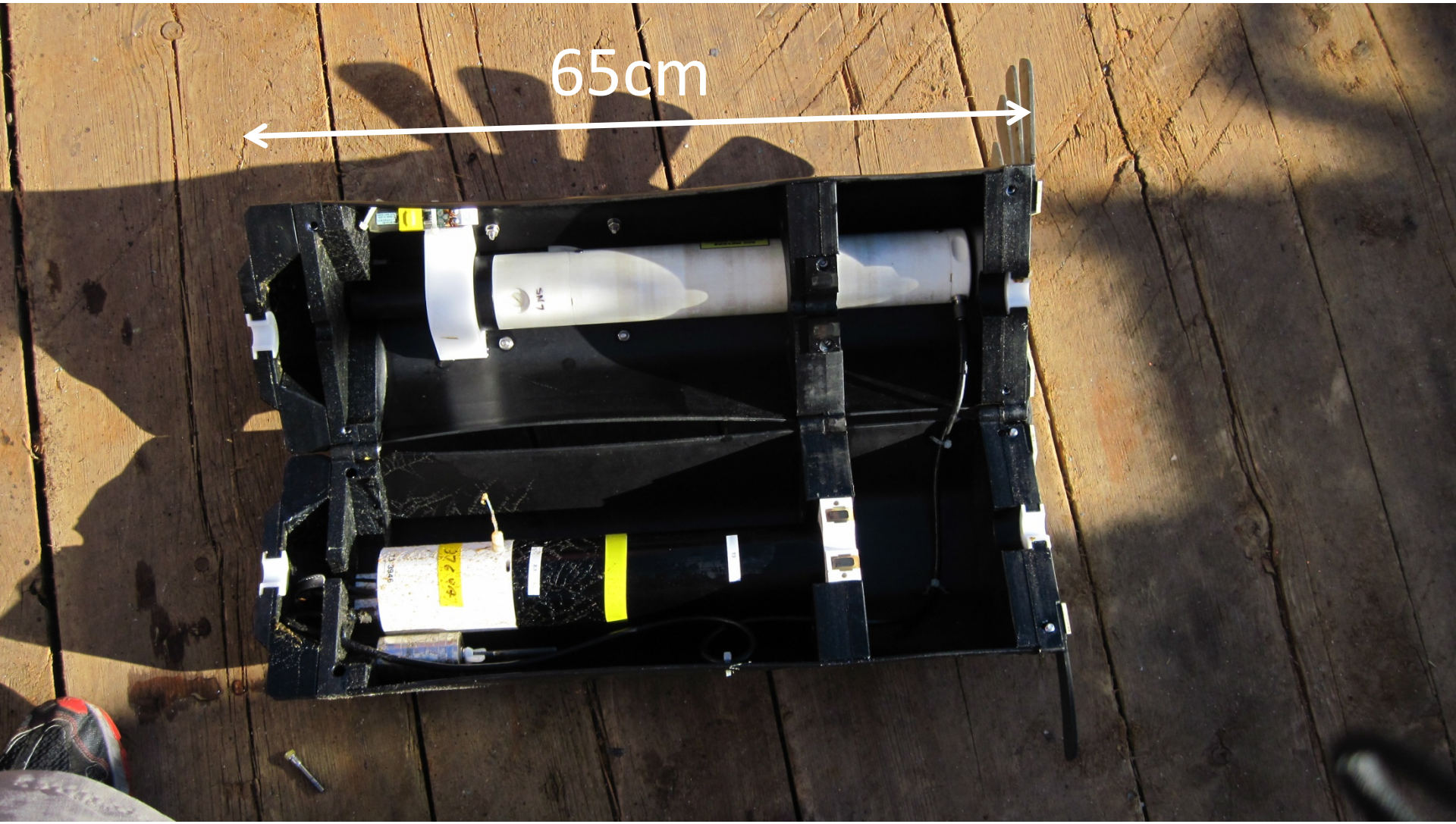
Prawler (Profiler+Crawler)



MAX GROSS 30480 Kg 67196 Lbs

TARE 3930 Kg 8664 Lbs

NOAA PMEL

Sampling Scheme

- A sample consists of CTD measurement taken on descent at the end of 2sec of pumping
- Sample taken every 8sec in upper water column
- User selectable transition depth shifts to 15sec sampling (to conserve power)
- #/profiles per day is typically 5-8
- #/profiles per day depends on buoy motion (winds!). Each profile could be sampled depending on power budget.

SBE Prawler CTD

SPECIFICATIONS	**Range(s)**	**Calib. Range**	**Accuracy** (within cal. range)	**Accuracy Resolution** (outside cal. Range)
Conductivity (S/m):	0-9	0-6	± 0.0003	better than ±0.0010 1 0.00001
(mS/cm equivalent)	*0-90*	*0-60*	*± 0.003*	*better than ±0.01 0 1* *0.0001*
Temperature (0C):	-5 to +42	+1 to +32	± 0.002	better than ±0.004 1 0.001
Pressure (depth) (dbar): 0-600 decibar full scale			± 0.1% F.S.	0.002% F.S.
Salinity (PSS 78) 0to 45		0 to 35	±0.0053	±0.0153

Power Supply: 10 -15VDC nominal

Power consumption: 150 mw @ recommended 10 ml/sec. pump rate (135 mw at 8 mllsec.) Optional D.O. adds 60mw. Quiescent: 15 mA

Calibrated at Seabird and vs SBE 9 off Kona with excellent results.

SBE Prawler CTD

Mechanical:
Weight (350 m version): CTD and pump 1.1 kg (in air) 0.25 kg (in water)
Weight (1500 m version): CTD and pump 1.49 Kg (in air) 0.49 kg (in water) Diameter 2.5 inches.

Overall length approx 14 inches.

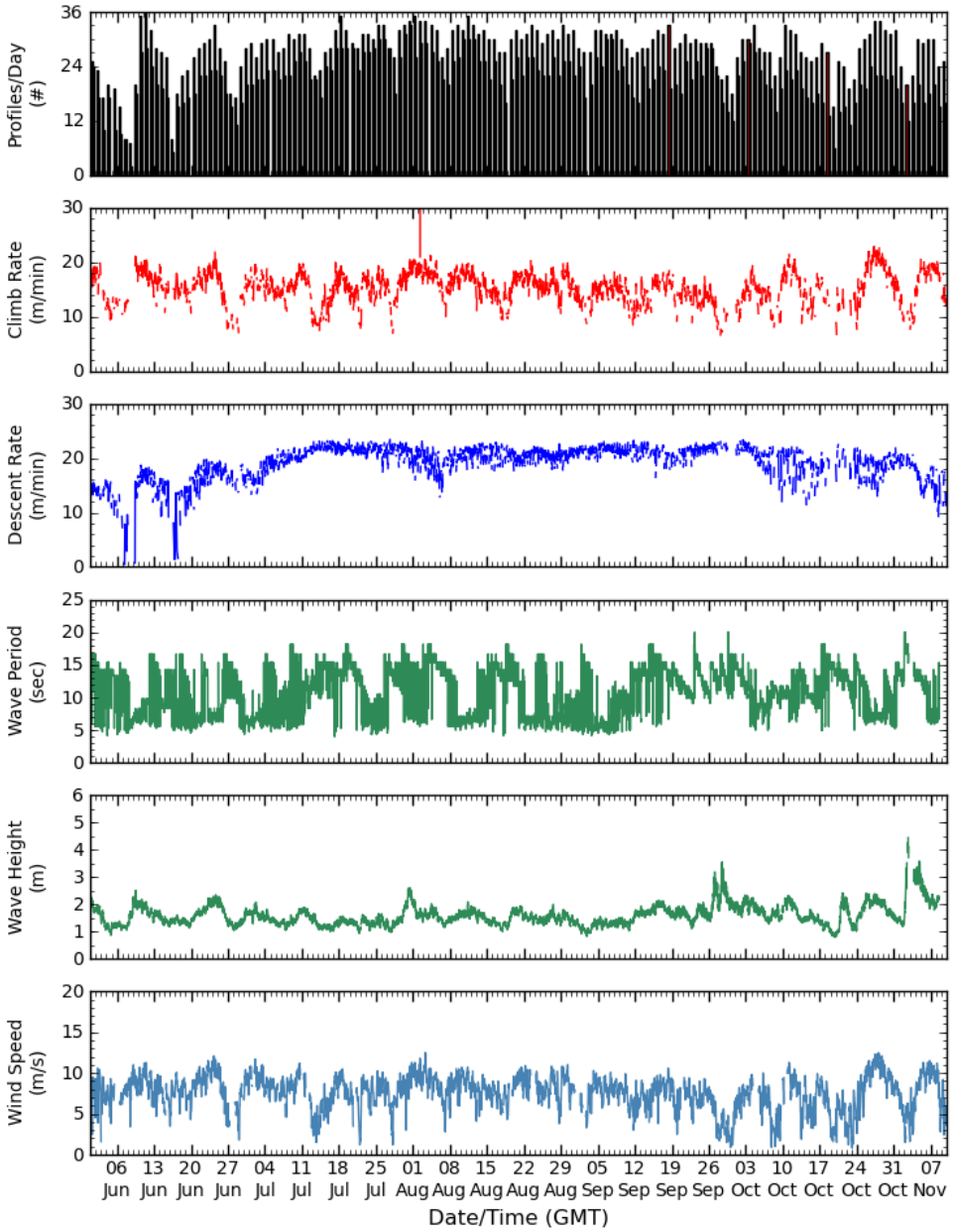
Maximum temperature drift of .0005 degrees per year; maximum salinity drift of .0015 psu per year.

Telemetry

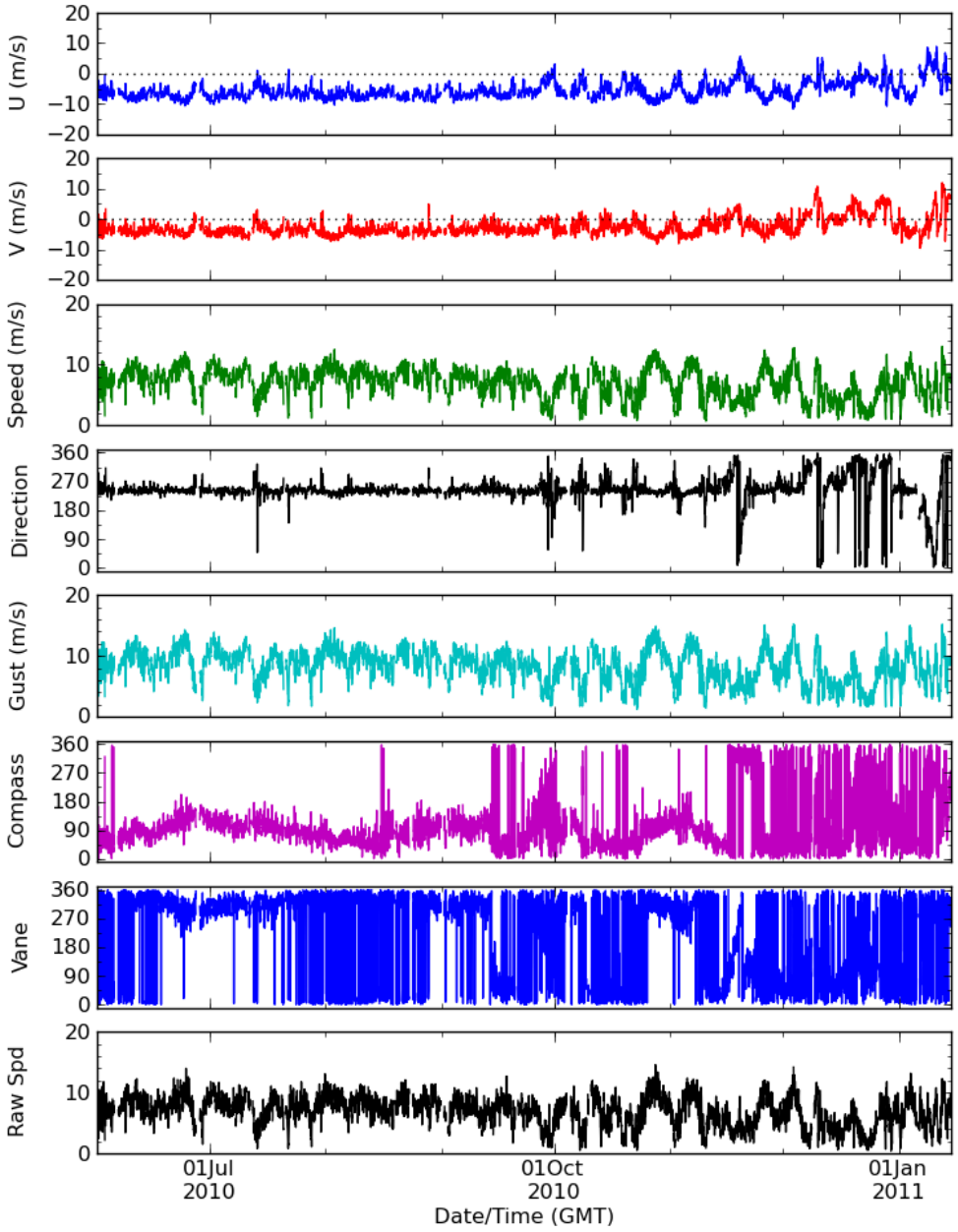
- Buoy has a Vaisala WTX-520 (ATRH, wind, baro, rain), but datalogger can accommodate other sensors
- Prawler uses IMM to communicate w/buoy
- Buoy communicates via Iridium(RUDICS) to shore
  - User selectable rates, typically is x4 per day
  - Bi-directional commands allows for realtime change of certain parameters (depth, sample rate change, #profiles to sample, engineering parameters)

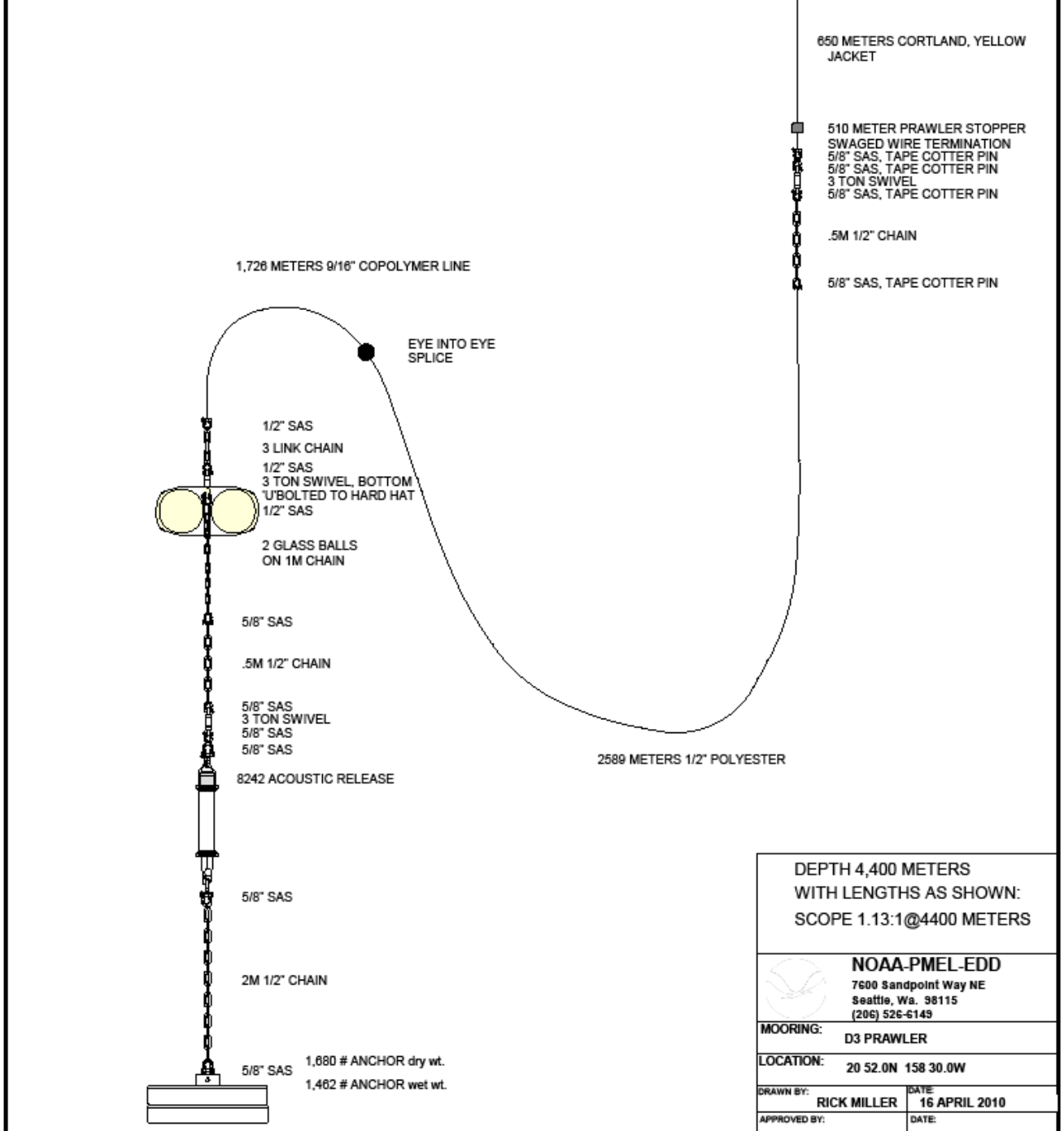
Prawler Test Data

Platform ID 36



Wind Sensor Data: WXT 036





DEPTH 4,400 METERS
WITH LENGTHS AS SHOWN:
SCOPE 1.13:1@4400 METERS

NOAA-PMEL-EDD
7600 Sandpoint Way NE
Seattle, Wa. 98115
(206) 526-6149

MOORING:	D3 PRAWLER
LOCATION:	20 52.0N 158 30.0W
DRAWN BY: RICK MILLER	DATE: 16 APRIL 2010
APPROVED BY:	DATE: